

amples are almost scalariform. The type, fig. 6, second from left, is 7.25 mm. in diameter, 7 mm. high. It is No. 5843 in the type collection, Geology Department, Stanford University, and, with the figured paratypes, all bleached, is from Winnemucca Lake, Nevada, where dead, probably fossil, shells are abundant on the shore. They occur abundantly in the same condition at Pyramid Lake, all bleached shells. It was recorded from Pyramid Lake by Call and Beecher, as *Pompholyx effusa*, and by Stearns as *P. effusa* and varieties in "a calcareous deposit." I have seen none from either lake that can be considered typical *effusa*, but at Klamath Lake, Oregon, I found some *effusa* showing a tendency to intergrade with *nevadensis*.

PLATE 9

- Fig. 1. *Helisoma occidentale* (Cooper). Upper Klamath Lake, Oregon. Neotype, middle figure. University of Colorado.
- Fig. 2. *Helisoma binneyi* (Tryon). Whatcom Lake, Bellingham, Washington.
- Fig. 3. *Helisoma traskii* (Lea). Antioch, California.
- Fig. 4. *Helisoma ammon* (Gould). Lake near Watsonville, California.
- Fig. 5. *Parapholyx solida* (Dall). From type lot, White Pine, Nevada.
- Fig. 6. *Parapholyx effusa nevadensis*, n. sp. Winnemucca Lake, Nevada. Stanford University collection. Holotype, second figure from left, others paratypes.
- Fig. 7. *Parapholyx effusa nevadensis*, n. sp. Pyramid Lake, Nevada.
- Fig. 8. *Parapholyx effusa effusa* (Lea). Upper Klamath Lake, Oregon.

A NEW MIDDLE MIOCENE NEPTUNEA FROM CALIFORNIA

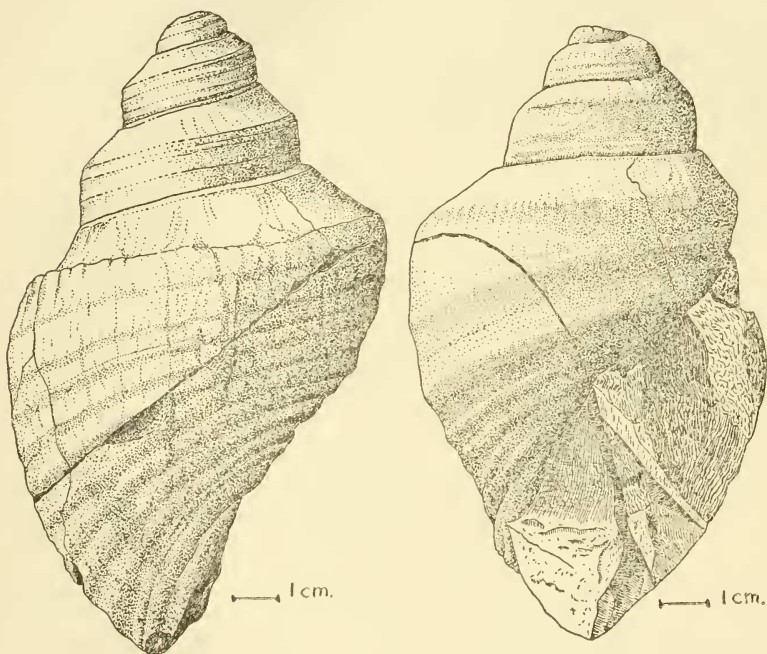
BY U. S. GRANT AND E. H. QUAYLE

During September, 1933, Messrs. J. E. Eaton and Gordon A. Macdonald spent a fortnight in the Caliente Range of

eastern San Luis Obispo County, California, doing geological field work and collecting fossils from the thick Tertiary sediments exposed there. In the collections of Mollusca which were submitted to us the following species occurs which appears to be new.

NEPTUNEA (SULCOSIPHO) EATONI Grant and Quayle, sp. nov. Text figures 1, 2.

Shell large, ventricose, with an elevated spire; whorls 4



or 5 (incomplete), nuclear whorls unknown, the upper two-fifths of each spire whorl with a prominent sloping tabulation and two or three broad, low, rounded, almost obsolete spiral ribs below; body-whorl with about nine larger spiral ribs becoming coarser and more prominent anteriorly. All whorls slightly convex below the tabulation. Body whorl about $1\frac{4}{5}$ length of spire. Aperture large, anterior canal rather long (incomplete). Width of body-whorl, 72 mm.; of penultimate whorl, 62 mm.; total length about 130 mm. (incomplete).

Type Specimen: A fine grained sandstone cast (Univ. Calif. at Los Angeles, Cat. No. 3385) collected by J. E. Eaton and G. A. Macdonald from a megafossil zone designated "MF20" by J. E. Eaton, in Earnest's Canyon, Caliente Mountains, eastern San Luis Obispo County, California (Univ. Calif. at Los Angeles locality No. 477). This fossil zone is apparently in the upper part of the middle of the Temblor horizon, middle Miocene.

This new species is closely related to *Neptunea (Sulcosipho) stantoni* (Arnold)¹ of the Purisima and Merced formations of the coastal regions of middle California but it is considerably larger and has a relatively much lower spire. It belongs to the section *Clinopegma* Grant and Gale,² which includes in addition to "*Buccinum*" *unicum* Pilsbry,³ the genotype, *Neptunea (Sulcosipho) magna* (Dall)⁴ and *stantoni* (Arnold). It recalls *Buccinum viridum* Dall,⁵ a living whelk from deep water off the Channel Islands of southern California, but the new Miocene species has a longer canal and is very much larger. The new species is named in honor of Mr. J. E. Eaton whose enthusiastic field work has added much to our knowledge of California stratigraphy.

A NEW DRYMAEUS FROM BARRO COLORADO ISLAND,
PANAMA CANAL ZONE

BY JAMES ZETEK,
Balboa, C. Z.

DRYMAEUS PILSBRYI, n. sp. Pl. 13, fig. 1. The shell is excessively thin and fragile, imperforate, ovate, of 4.5 whorls, glossy, translucent, having four narrow chestnut-brown bands on a pellucid-whitish ground, the bands situ-

¹ *Chrysodomus stantoni* Arnold, Proc. U. S. Nat. Mus., vol. 34, p. 386, pl. 37, fig. 4, 1908.

² Mem. San Diego Soc. Nat. Hist., vol. 1, p. 660, 1931.

³ Proc. Acad. Nat. Sci. Phila., vol. 57, p. 102, 1905; vol. 59, p. 244, pl. 20, fig. 7, 1907. Japan.

⁴ *Chrysodomus (Ancistrolepis) magnus* Dall, Proc. U. S. Nat. Mus., vol. 17, p. 709, pl. 29, fig. 5, 1895.

⁵ Proc. U. S. Nat. Mus., vol. 12, p. 320, pl. 6, fig. 9, 1889.